

General Safety Instructions for **Operating Power** **Woodworking Machines and Tools**

Before you begin using any power tools:

1. Wear proper clothing. Remove jewelry, eliminate loose clothing, and confine long hair.
2. Goggles, glasses, or face shields are worn at all power machines.
3. Long hair is controlled by hairnet or appropriate cap.
4. The tool rest of the grinder is set properly.
5. Tool rests on lathes which are in operation are secured.
6. Tools and scraps are not left on the floor.
7. Oily rags are placed in a metal safety can.
8. Oil spots are wiped from the floor.
9. No tools with mushroomed heads or loose or broken handles are used.
10. All files have handles before students use them.
11. All accidents are reported to the supervisor and taken care of properly.
12. No "horseplay" of any kind occurs in the shop.
13. The tool room has no defective tools in the rack.
14. No safety guards are removed from machinery.
15. No operator walks away from his/her machine and leaves it running.
16. All danger zones are marked.
17. No one talks to or touches anyone operating a machine.
18. Shirt tails are to be tucked in at ALL times.
19. Coats or sweaters are not worn while students are working.

Operating a Table Saw

1. Operate only after you have received instruction.
2. Wear proper clothing. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Wear safety goggles or glasses.
4. Make sure saw guards are in place and operative. Guards must be kept down over the saw while machine is being operated.
5. The saw must not be raised above the table *more* than absolutely necessary to make the cut, approximately 1/8 inch.
6. A push stick must be used when ripping narrow pieces of lumber.
7. The clearance block must be fastened to fence when cutting off short pieces of stock.
8. Fence must not be adjusted until saw is at a dead stop.
9. Sawdust underfoot is slippery; keep floor around saw area clean.
10. Use brush to keep table clear of scraps; never use the hands.
11. Fingers must be kept clear of track of saw, and hands must never be allowed to cross saw line in advance of the end of the board while machine is in operation.

12. Reaching over the saw blade or passing wood over saw blade is prohibited.
13. All special set-ups and dado heads must be inspected by supervisor before power is turned on.
14. The dado head must be taken off the saw arbor after use.
15. When helping to "tail-off" the saw, students must never pull on a board being ripped. They should hold board up and allow operator to push stock through saw.
16. Re-sawing must not be done on circular saw without special permission of the supervisor.
17. Cylindrical stock must not be cut on circular saw.
18. Never lower pieces of stock down over the saw. This operation is sometimes performed when cutting holes in rails for drawer fronts. Special permission should be obtained from the supervisor for doing this type of work.
19. Ripping stock without using the ripping fence or cross-cutting stock without using the sliding cross-cutting fence is extremely dangerous and is absolutely forbidden. This rule applies to dado head work.
20. See that no fence or set-up will be in line of saw before starting work or turning on power.
21. Be sure that saw or tilting arbor saw will clear on both sides when sawing angles before power is turned on.
22. Never stand directly behind the blade; stay to the left.
23. Only operator turns machine on and off. 24. Only operator should be in safety area of the saw.

Operating a Band Saw

1. Operate only after you have received instruction.
2. Wear proper clothing. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Wear safety goggles or glasses.
4. Always keep guards in place. Both upper and lower wheels, as well as most of the blade itself, shall be guarded.
5. Adjust the guard to about 1/4 inch above thickness of stock.
6. The upper and lower guides shall be properly adjusted when machine is stopped completely, so that there will be a minimum of blade breakage.
7. A clicking or cracked blade should be stopped immediately.
8. The saw shall be allowed to stop itself naturally in order that the blade may not be damaged.
9. Plan your cuts carefully; layout and make release cuts before cutting long curves.
10. If the stock binds or pinches the blade, do not attempt to back out until power has been shut off and the machine stops.
11. Proper blade width for the diameter of work being cut shall be used. Avoid cutting a radius too small for the blade width and pinching the blade.
12. The right side of the machine is generally the most dangerous place to stand in case of blade breakage.
13. Proper blade tension shall be maintained.

14. The blade shall be sharp and properly set at all times.
15. Remove scrap material from saw table with a stick or brush.
16. If the blade breaks, shut off power and stand clear until machine stops entirely.
17. Make cuts always under power--never while machine is coasting.
18. Leave the machine only after power is turned off and blade has stopped moving. This is especially important with the band saw.

Operating a Jig/Scroll Saw

1. Operate only after you have received instruction.
2. Wear proper clothing. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Wear face shield, safety glasses, or goggles.
4. Cut only stock with a flat surface on bottom.
5. Make adjustments only when machine is at a dead stop.
6. Install saw blades to cut on the downstroke.
7. Tighten blade securely in lower vise, then in upper vise. Check blade for correct tension.
8. Make sure the saw blade is the proper size for the job.
9. Adjust hold-down so it will be as close as possible to the work.
10. Turn machine by hand to make sure all parts are clear.
11. Make sure that no one but you is inside the operator's line.
12. Select correct machine speed for the material and blade type.
13. Lower the hold-down foot to press lightly on the surface of the wood.
14. Turn on power after permission is given.
15. Hold material firmly.
16. Feed the material into the machine at a moderate rate of speed.
17. Keep fingers away from saw and hands out of the path of saw.
18. Report mechanical defects or a broken blade to the supervisor.
19. Turn off power after using scroll saw and stand by until the machine has stopped.
20. Clear away scraps of wood on the table only after saw stops running,

Operating a Radial Arm Saw

1. Operate only after you have received instruction.
2. Wear proper clothing while operating machine. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Wear safety goggles or glasses.
4. Always keep guards in place.
5. Before starting the machine, all clamping devices should be tight.
6. Saw must be kept well sharpened.
7. Be sure saw swings clear and free.
8. Place stock snugly against backstop, and flat on the table.
9. Operate the saw with your left hand, never reach across your body to operate the saw.
10. Set the anti-kickback device 1/8 inch above the material to be cut.
11. While ripping, the rip lock should be tight.

12. Two people are necessary while ripping.
13. While ripping, be sure to feed the material from the in feed end of the saw guard, never from the kickback end. Make no exception to this rule.
14. Before making special adjustment, the saw must be fully stopped.
15. Before starting the motor, make sure everything is clear of the cutter.
16. Remove scraps from the path of the radial-saw blade with a piece of wood while the saw is at a dead stop.
17. Stand to one side and keep your hands away from the direction of travel of the radial-saw blade.
18. A radial arm saw is used primarily for crosscutting stock. Use a table saw for ripping when possible.

Operating a Planer/Surfacers

1. Operate only after you have received instruction.
2. Wear proper clothing while operating machine. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Wear safety glasses or goggles.
4. Make sure guards are in place and operative.
5. Do not plane two or more pieces of stock with various thicknesses. It could be kicked out. Plane only one thickness at a time. (Note: Some planers have sectional feed rollers, which could allow planing various thicknesses. Supervisors make appropriate decision.)
6. Keep your fingers from under the stock as it is fed through the planer.
7. Stock must be at least 15 inches long or greater than the distance between centers of infeed and outfeed rollers. True one face of the stock on the jointer before planing.
8. Always make sure machine is turned off before leaving.
9. Make sure no one is behind machine while in operation.
10. Always stand erect and to one side of work being planed.
11. Do not look into the planer as board passes through.
12. Plane no thickness less than 3/8 inch.
13. Stock that is 8 inches in width or less should not be planed more than 1/16" per cut. Stop the planer and run all pieces through, reducing all to the same thickness. With a rule, measure the thickness of the stock at the thickest point. Place the stock on the bed of the planer with the working face down and the grain turned so that the knives will cut with the grain. Hold the board flat on the feed-in table when starting the cut. The knives on a single-surface planer cut on the upper side and revolve in a direction opposite to the direction of feed.
14. Never attempt to plane cross-grain.

Operating a Jointer

1. Operate only after you have received instruction.
2. Wear proper clothing while operating machine. Remove jewelry, eliminate loose clothing, and confine long hair.

3. Wear safety glasses or goggles.
4. Make sure guard is in place and operating freely.
5. Always check the depth of cut before starting the machine.
6. Plane no thickness greater than 1/4 inch.
7. Keep your fingers well away from the cutterhead and never placed on the stock above the cutterhead.
8. Stock must be at least 18 inches long.
9. Always use a push stick to push the end of the stock across the cutterhead.
10. Always make sure machine is turned off before leaving.
11. Make sure everyone is from behind machine while in operation.
12. Always stand erect and to one side of work being planed.
13. Never attempt to plane cross-grain.

Operating a Compound Miter Saw

1. Operate only after you have received instruction.
2. Wear proper clothing while operating machine. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Wear face shield, goggles, or safety glasses.
4. Make sure all guards are in place and are operating properly.
5. Be sure power is disconnected before making angle adjustments or changing blades.
6. Always hold the work firmly against the fence and table.
7. Never reach across your body to operate the saw.
8. Allow motor to reach full speed before starting to cut.
9. Apply smooth steady pressure to the motor when cutting.
10. Lock the slide (if equipped) when not in use. When using the slide, start your cut at the front of the work and push the saw into the work.
11. Use the brake to stop the blade before removing scrap or chips from the work area.

Operating a Portable Jig Saw

1. Operate only after you have received instruction.
2. Wear proper clothing while operating machine. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Always use proper eye protection.
4. Make sure all guards are in place and are operating correctly,
5. Make sure the blade is the correct type for the material and that it is tightly clamped in the chuck.
6. Be sure the switch is off before connecting to the power source.
7. Use vise or clamps to securely hold material to be cut.
8. Keep cutting pressure constant; do not force the blade into the work.
9. Always keep the base tightly against the materials being cut.
10. Do not set the saw down on the bench until it has stopped.
11. If the blade is in the tool, be sure and lay the tool on its side.

Operating a Portable Circular Saw

1. Operate only after you have received instruction.
2. Wear proper clothing. Remove jewelry, eliminate loose clothing, and confine long hair.
3. Make sure all guards are in place and operating properly.
4. Wear face shield, goggles, or safety glasses.
5. Make sure the telescoping guard returns automatically to cover the blade after each cut.
6. Check the base setting for the proper depth of cut.
7. Make sure the power cord is clear of the blade.
8. Be sure the material you are cutting is adequately supported.
9. Do not start the cut until the blade has reached full speed.
10. Advance the saw slowly, straight through the work. Do not twist or turn.
11. If the saw blade binds or smokes, stop cutting immediately.
12. The blade should be extended below the work until the blade gullets clear the material.
13. Do not set the saw down until the blade stops.

Using a Woodworker's Vise

1. Keep the vise tight on the bench. A loose vise is inefficient.
2. Keep your work clean. Never oil or grease a woodworker's vise.
3. Do not over-tighten.
4. Normal handle leverage holds jaws securely. Do not hammer the handle. Never pound to tighten or loosen. Do not use handle extension.
5. Avoid using woodworker's vise to clamp glue joints. Dried glue on vise screw, etc., makes vise operation difficult.
6. Do not use the vice to hold metal objects.